



# CANSO GLOBAL SAFETY CONFERENCE 2025

24 – 28 MARCH 2025 • CHRISTCHURCH, NEW ZEALAND

HOSTED BY **AIRWAYS**



# CANSO ANNUAL SAFETY PERFORMANCE BENCHMARK

# PRESENTERS



**Bruno Ochin**

Manager, Safety Intelligence  
NAV CANADA



**Jocelin Greiner**

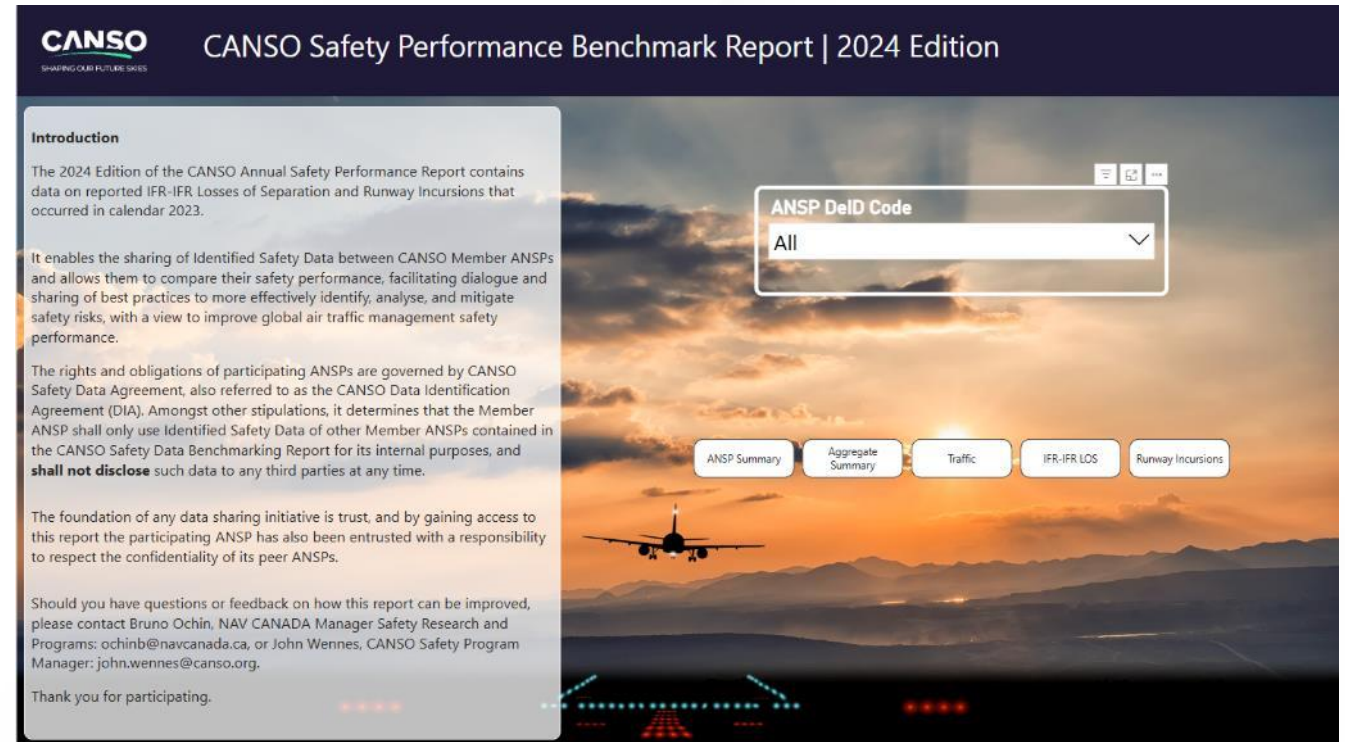
Performance & Safety Intelligence Project Manager  
DSNA



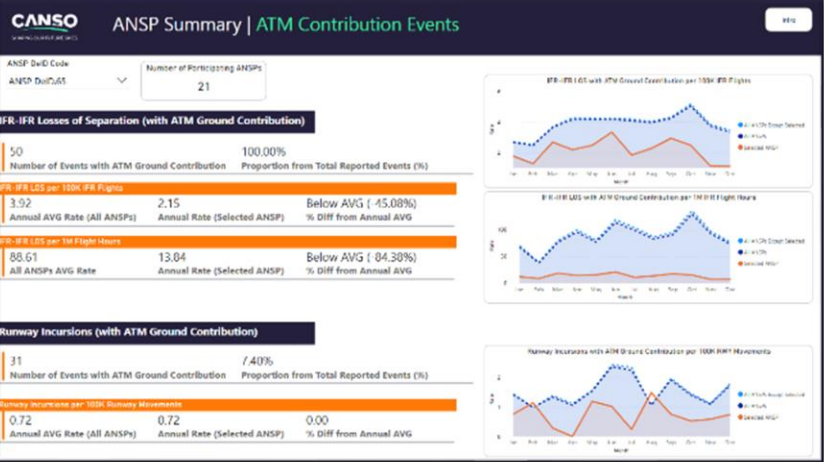
# CANSO ANNUAL SAFETY PERFORMANCE BENCHMARK DASHBOARD

## New and Improved Experience

- Dynamic Interaction with Data
- Quicker Turn-Around
- Scalable



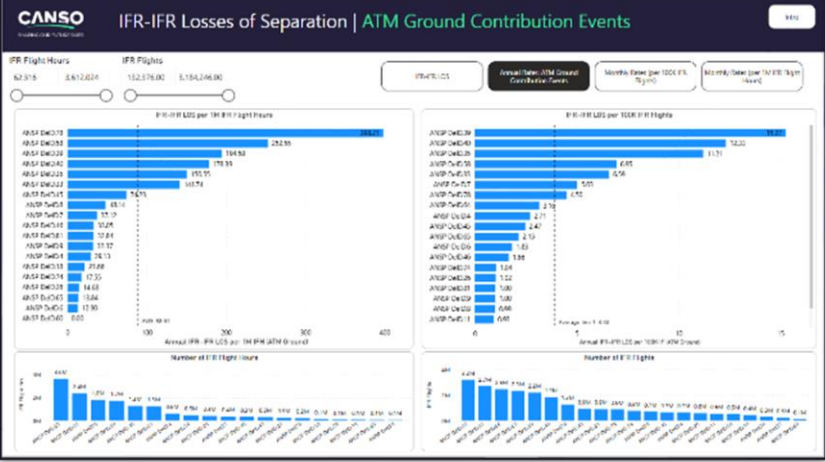
# Benchmark Summary



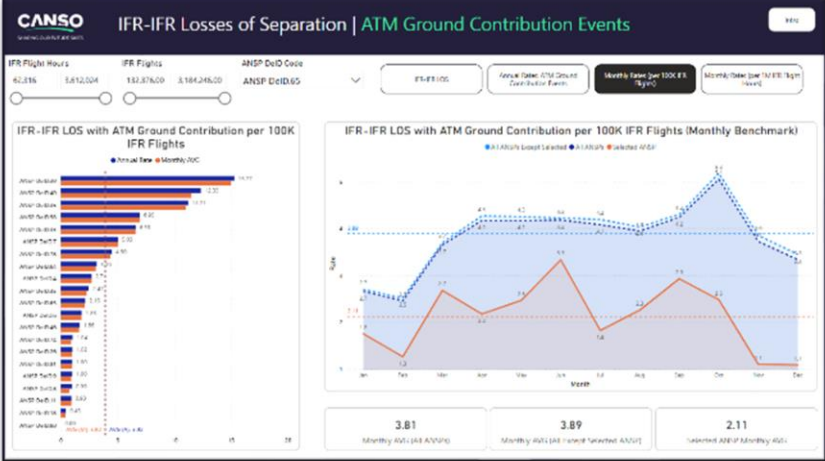
# Adjustable Traffic Cohorts



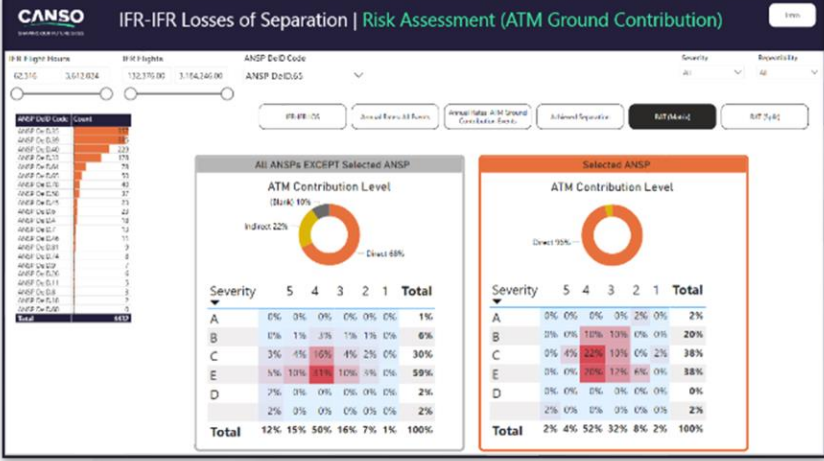
# Annual Metrics Comparison



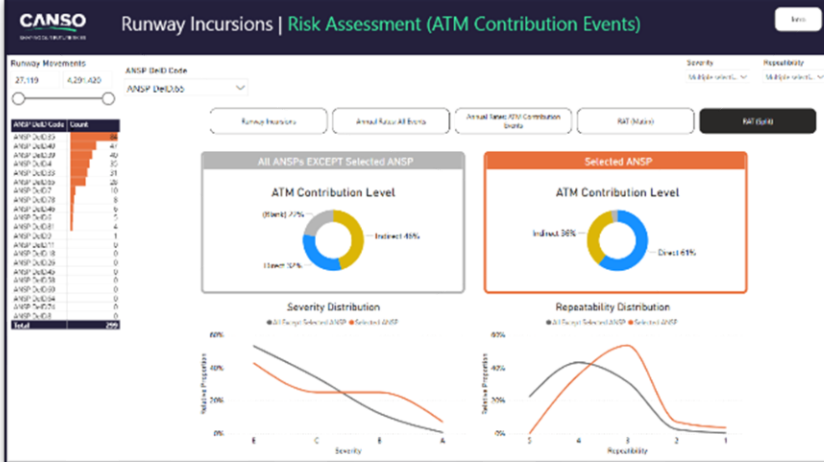
# Monthly Metrics Comparison



# Risk Assessment Comparison



# Risk Assessment Comparison



# BEFORE DIGGING INTO THE FIGURES...

... something to keep in mind

Flights with no incident	
Average	99.99%
Standard deviation	0.008%
Minimum	99.97%

ANSP DeID Code	Runway Movements	Runway Incursion Count (All Events)	% Traffic Without RI
ANSP DeID.11	439 333	2	100,000%
ANSP DeID.18	27 119	0	100,000%
ANSP DeID.26	377 915	1	100,000%
ANSP DeID.33	1 788 867	115	99,994%
ANSP DeID.35	3 946 806	294	99,993%
ANSP DeID.39	1 642 121	112	99,993%
ANSP DeID.4	855 789	45	99,995%
ANSP DeID.40	1 546 015	120	99,992%
ANSP DeID.45	106 774	0	100,000%
ANSP DeID.46	309 750	14	99,995%
ANSP DeID.58	634 035	59	99,991%
ANSP DeID.6	2 890 072	162	99,994%
ANSP DeID.60	58 358	10	99,983%
ANSP DeID.64	1 597 293	37	99,998%
ANSP DeID.65	4 291 420	419	99,990%
ANSP DeID.7	763 726	10	99,999%
ANSP DeID.74	242 368	0	100,000%
ANSP DeID.78	374 747	43	99,989%
ANSP DeID.8	50 702	0	100,000%
ANSP DeID.81	114 299	39	99,966%
ANSP DeID.9	116 646	7	99,994%

# 1. HOW TO USE THE TOOL

“This tool does not give you the answers, but helps you find the right questions

## IFR Flight Hours

62 316

3 612 024

## IFR Flights

132 376,00

3 184 246,00

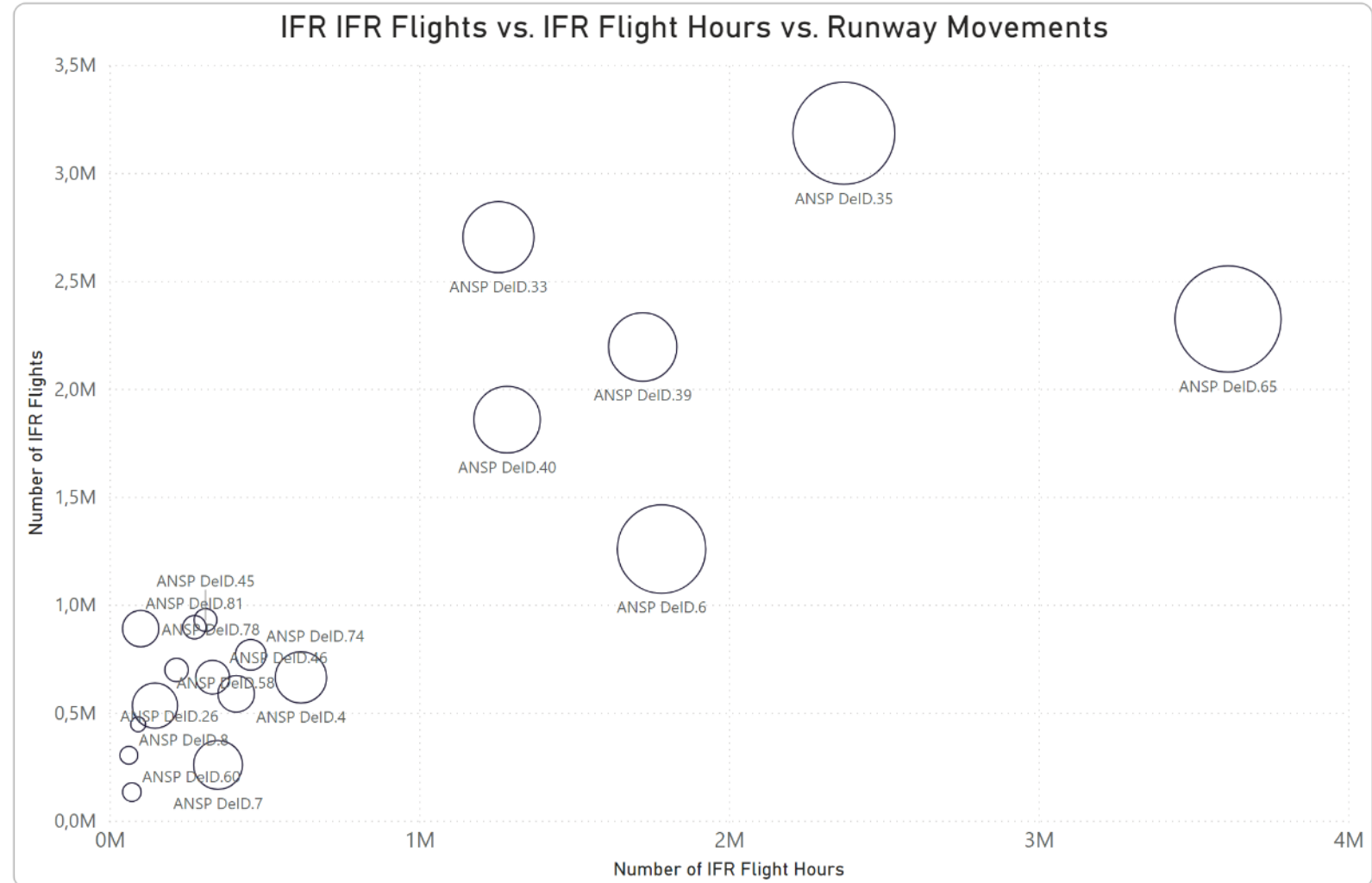
## Runway Movements

27 119

4 291 420

**Y Axis:** Number of IFR Flights  
**X Axis:** Number of IFR Flight Hours  
**Circle Width:** Number of Runway Movements

ANSP DelD Code	IFR Flights	IFR Flight Hours	RWY Movements
ANSP DelD.65	2 323 723	3 612 024	4 291 420
ANSP DelD.35	3 184 246	2 371 325	3 946 806
ANSP DelD.6	1 258 111	1 782 528	2 890 072
ANSP DelD.33	2 703 031	1 255 847	1 788 867
ANSP DelD.39	2 193 918	1 721 650	1 642 121
ANSP DelD.64	2 468 352		1 597 293
ANSP DelD.40	1 857 610	1 283 713	1 546 015
ANSP DelD.4	663 723	617 961	855 789
ANSP DelD.7	258 538	350 215	763 726
ANSP DelD.58	532 748	146 506	634 035
ANSP DelD.11	538 703		439 333
ANSP DelD.26	587 390	408 855	377 915
ANSP DelD.78	889 675	100 449	374 747
ANSP DelD.46	664 480	332 854	309 750
ANSP DelD.74	768 599	455 857	242 368
ANSP DelD.9	698 278	216 272	116 646
ANSP DelD.81	896 111	274 035	114 299
ANSP DelD.45	929 513	309 838	106 774
ANSP DelD.60	132 376	71 976	58 358
ANSP DelD.8	303 101	62 316	50 702
ANSP DelD.18	446 615	92 328	27 119





# POTENTIAL FUTURE ENHANCEMENTS

## Cohort Section Ideas



**Airport Characteristics**  
(Traffic Volume, IFR/VFR Split, Runway Layout)



**Method of Event Detection**  
(Manual vs. Automatic)



**Operational Environment**  
(Enroute, Approach, Control Zone)



**Airport by Airport**  
(Similar airports)



**Regional Cohorts**

## 2. LOOK AROUND – FIND SURPRISES



IFR Flight Hours

IFR Flights

62 316

3 612 024

132 376,00

3 184 246,00

Annual Rates: All Events

Annual Rates: ATM Ground  
Contribution Events

Achieved Separation

RAT (Matrix)

RAT (Split)

ANSP DelID Code	IFR Flights	IFR Flight Hours	IFR-IFR LOS Count (All Events)	IFR-IFR LOS per 100K IFR Flights (All Events)	IFR-IFR LOS per 1M IFR Flight Hrs. (All Events)	With ATM Ground Contribution	IFR-IFR LOS Count (ATM Ground Contribution Events)	IFR-IFR LOS per 100K IFR Flights (ATM Ground Contribution Events)	IFR-IFR LOS per 1M IFR Flight Hrs. (ATM Ground Contribution Events)
ANSP DelID.11	538 703		7	1,30		71%	5	0,93	
ANSP DelID.64	2 468 352		211	8,55		37%	78	3,16	
ANSP DelID.8	303 101	62 316	3	0,99	48,14	100%	3	0,99	48,14
ANSP DelID.18	446 615	92 328	2	0,45	21,66	100%	2	0,45	21,66
ANSP DelID.78	889 675	100 449	47	5,28	467,00	85%	40	4,50	398,21
ANSP DelID.58	532 748	146 506	40	7,51	271,03	93%	37	6,95	252,55
ANSP DelID.9	698 278	216 272	9	1,29	41,51	78%	7	1,00	32,37
ANSP DelID.81	896 111	274 035	9	1,00	31,84	100%	9	1,00	32,84
ANSP DelID.45	929 513	309 838	24	2,58	71,46	96%	23	2,47	74,23
ANSP DelID.46	664 480	332 854	14	2,11	41,06	79%	11	1,66	33,05
ANSP DelID.7	258 538	350 215	13	5,03	31,12	100%	13	5,03	37,12
ANSP DelID.26	587 390	408 855	10	1,70	21,46	60%	6	1,02	14,68
ANSP DelID.74	768 599	455 857	10	1,30	21,14	80%	8	1,04	17,55
ANSP DelID.4	663 723	617 961	18	2,71	29,13	100%	18	2,71	29,13
ANSP DelID.33	2 703 031	1 255 847	278	10,28	221,16	64%	178	6,59	141,74
ANSP DelID.40	1 857 610	1 283 713	249	13,40	193,17	92%	229	12,33	178,39
ANSP DelID.39	2 193 918	1 721 650	426	19,42	247,41	79%	335	15,27	194,58
ANSP DelID.6	1 258 111	1 782 528	53	4,21	29,71	43%	23	1,83	12,90
ANSP DelID.35	3 184 246	2 371 325	411	12,91	173,32	87%	357	11,21	150,55
ANSP DelID.65	2 323 723	3 612 024	50	2,15	13,84	100%	50	2,15	13,84

Do some ANSPs only analyse and report LOS incidents with ATM Ground Contribution ?

## Runway Movements

27 119

4 291 420

Annual Rates: All Events

Annual Rates: ATM Contribution Events

RAT (Matrix)

RAT (Split)

ANSP DeID Code	Runway Movements	Runway Incursion Count (All Events)	Runway Incursions per 100K RWY Mvmts (All Events)	% with ATM Ground Contribution	Runway Incursion Count (ATM Ground Contribution Events)	Runway Incursions per 100K RWY Mvmts (ATM Ground Contribution Events)
ANSP DeID.18	27 119	0	0,00		0	0,00
ANSP DeID.45	106 774	0	0,00		0	0,00
ANSP DeID.74	242 368	0	0,00		0	0,00
ANSP DeID.8	50 702	0	0,00		0	0,00
ANSP DeID.26	377 915	1	0,26	0%	0	0,00
ANSP DeID.11	439 333	2	0,46	50%	1	0,23
ANSP DeID.9	116 646	7	6,00	14%	1	0,86
ANSP DeID.60	58 358	10	17,14	0%	0	0,00
ANSP DeID.7	763 726	10	1,31	100%	10	1,31
ANSP DeID.46	309 750	14	4,52	43%	6	1,94
ANSP DeID.64	1 597 293	37	2,32	24%	9	0,56
ANSP DeID.81	114 299	39	34,12	10%	4	3,50
ANSP DeID.78	374 747	43	11,47	19%	8	2,13
ANSP DeID.4	855 789	45	5,26	78%	35	4,09
ANSP DeID.58	634 035	59	9,31	34%	20	3,15
ANSP DeID.39	1 642 121	112	6,82	36%	40	2,44
ANSP DeID.33	1 788 867	115	6,43	27%	31	1,73
ANSP DeID.40	1 546 015	120	7,76	39%	47	3,04
ANSP DeID.6	2 890 072	162	5,61	9%	14	0,48
ANSP DeID.35	3 946 806	294	7,45	83%	244	6,18
ANSP DeID.65	4 291 420	419	9,76	7%	31	0,72



ANSP DelD Code	Runway Movements	Runway Incursion Count (All Events)	Runway Incursions per 100K RWY Mvmts (All Events)	% with ATM Ground Contribution	Runway Incursion Count (ATM Ground Contribution Events)	Runway Incursions per 100K RWY Mvmts (ATM Ground Contribution Events)
ANSP DelD.18	27 119	0	0,00		0	0,00
ANSP DelD.45	106 774	0	0,00		0	0,00
ANSP DelD.74	242 368	0	0,00		0	0,00
ANSP DelD.8	50 702	0	0,00		0	0,00
ANSP DelD.26	377 915	1	0,26	0%	0	0,00
ANSP DelD.11	439 333	2	0,46	50%	1	0,23
ANSP DelD.9	116 646	7	6,00	14%	1	0,86
ANSP DelD.60	58 358	10	17,14	0%	0	0,00
ANSP DelD.7	763 726	10	1,31	100%	10	1,31
ANSP DelD.46	309 750	14	4,52	43%	6	1,94
ANSP DelD.64	1 597 293	37	2,32	24%	9	0,56
ANSP DelD.81	114 299	39	34,12	10%	4	3,50
ANSP DelD.78	374 747	43	11,47	19%	8	2,13
ANSP DelD.4	855 789	45	5,26	78%	35	4,09
ANSP DelD.58	634 035	59	9,31	34%	20	3,15
ANSP DelD.39	1 642 121	112	6,82	36%	40	2,44
ANSP DelD.33	1 788 867	115	6,43	27%	31	1,73
ANSP DelD.40	1 546 015	120	7,76	39%	47	3,04
ANSP DelD.6	2 890 072	162	5,78	9%	14	0,48
ANSP DelD.35	3 946 806	244	7,45	83%	44	6,18
ANSP DelD.65	4 291 420	249	9,76	7%	31	0,72

Questions :

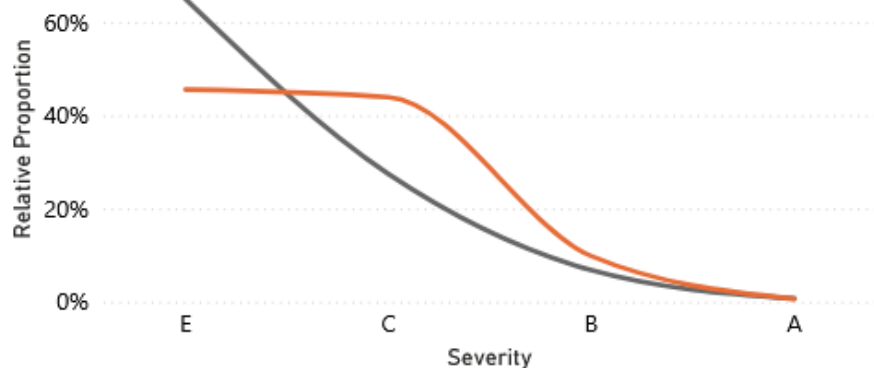
Different « ATM Ground Contribution » definitions ?

Are we looking at the same type of airfields (commercial, GA...) ?

## DSNA

### Severity Distribution

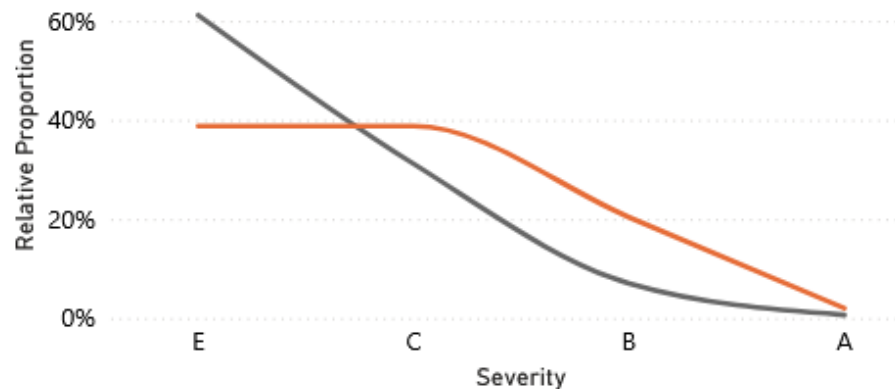
● All Except Selected ANSP ● Selected ANSP



## NAV CANADA

### Severity Distribution

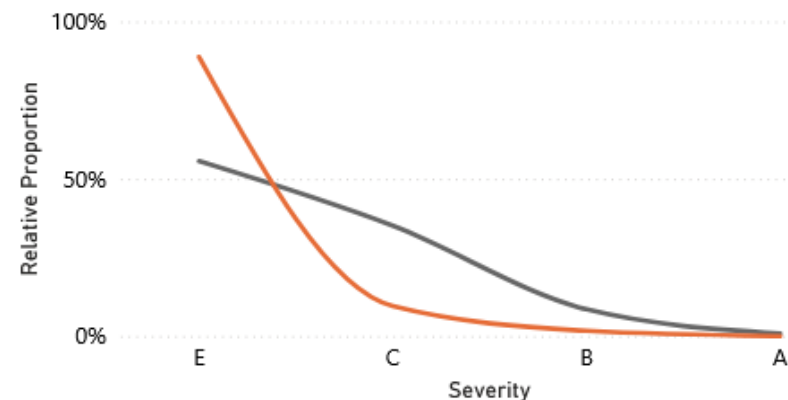
● All Except Selected ANSP ● Selected ANSP



## Other ANSP

### Severity Distribution

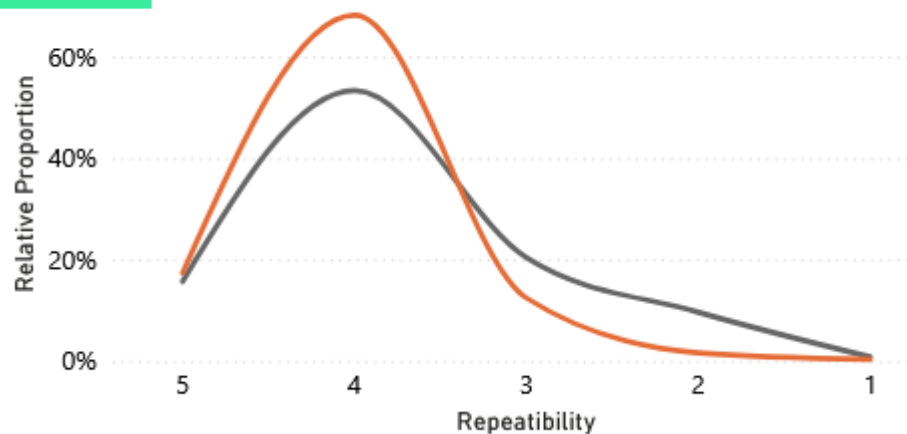
● All Except Selected ANSP ● Selected ANSP



## DSNA

### Repeatability Distribution

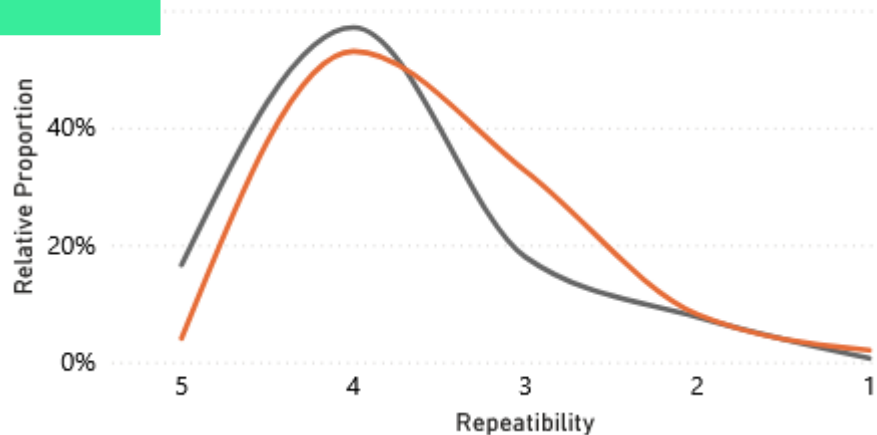
● All Except Selected ANSP ● Selected ANSP



## NAV CANADA

### Repeatability Distribution

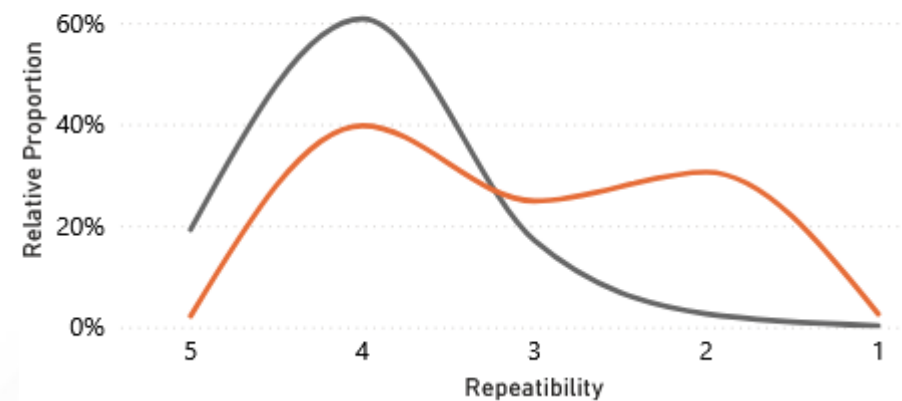
● All Except Selected ANSP ● Selected ANSP



## Other ANSP

### Repeatability Distribution

● All Except Selected ANSP ● Selected ANSP



# 3. DISCUSS

“Make it make sense”





# SAFETY INTELLIGENCE WORK GROUP

## CANSO SIWG Platform

- Enabling connections with other ANSPs
- The dashboard facilitates development of other methods to group (cohorts) and visualize data
- Work smart: sufficient insight with minimal workload
- Continued work on harmonization:
  - ATM Ground contribution
  - Differentiate the initiator of the ATC occurrence



# THANK YOU